

Title (en)  
METHOD FOR PREPARING SUPERABSORBENT POLYMER

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES STARK ABSORBIERENDEN POLYMERS

Title (fr)  
PROCÉDÉ DE PRÉPARATION D'UN POLYMÈRE SUPERABSORBANT

Publication  
**EP 3719059 A1 20201007 (EN)**

Application  
**EP 19895564 A 20191115**

Priority

- KR 20180161293 A 20181213
- KR 2019015681 W 20191115

Abstract (en)  
Provided is a method of preparing a superabsorbent polymer, which enables the preparation of the superabsorbent polymer exhibiting an improved absorption rate while maintaining excellent absorption performances. The method of preparing a superabsorbent polymer includes the steps of carrying out a crosslinking polymerization of a water-soluble ethylene-based unsaturated monomer having acidic groups which are at least partially neutralized, in the presence of an internal crosslinking agent having a predetermined chemical structure to form a water-containing gel polymer; gel-pulverizing the water-containing gel polymer; drying, pulverizing, and size-sorting the gel-pulverized water-containing gel polymer to form a base polymer powder; and carrying out a surface crosslinking of the base polymer powder by heat treatment in the presence of a surface crosslinking agent, wherein the gel-pulverizing step is carried out by extruding the water-containing gel polymer through a porous plate having a plurality of holes using a screw extruder mounted inside a cylindrical pulverizer under the condition that a chopping index is 28 (/s) or more.

IPC 8 full level  
**C08J 3/24** (2006.01); **C08F 2/44** (2006.01); **C08F 20/06** (2006.01); **C08F 20/26** (2006.01); **C08F 20/38** (2006.01); **C08F 20/56** (2006.01); **C08J 3/12** (2006.01); **C08J 9/04** (2006.01); **C08L 33/02** (2006.01); **C08L 101/14** (2006.01)

CPC (source: EP KR US)  
**B01J 20/103** (2013.01 - US); **B01J 20/267** (2013.01 - US); **B01J 20/28004** (2013.01 - US); **B01J 20/28016** (2013.01 - US); **B01J 20/3007** (2013.01 - US); **B01J 20/3085** (2013.01 - US); **B29B 9/12** (2013.01 - KR); **B29B 11/10** (2013.01 - KR); **B29B 11/14** (2013.01 - KR); **B29B 13/065** (2013.01 - KR); **B29C 49/071** (2022.05 - EP); **C08F 2/44** (2013.01 - EP KR); **C08F 20/06** (2013.01 - EP KR); **C08F 20/26** (2013.01 - EP KR); **C08F 20/38** (2013.01 - EP KR); **C08F 20/56** (2013.01 - EP KR); **C08J 3/075** (2013.01 - EP); **C08J 3/12** (2013.01 - EP KR); **C08J 3/122** (2013.01 - EP); **C08J 3/24** (2013.01 - EP); **C08J 3/245** (2013.01 - EP KR); **C08J 9/04** (2013.01 - EP KR); **C08L 33/02** (2013.01 - EP KR); **C08L 101/14** (2013.01 - EP KR); **B29B 2009/125** (2013.01 - KR); **B29C 2949/0715** (2022.05 - EP); **C08F 2810/20** (2013.01 - KR); **C08J 2333/02** (2013.01 - KR); **C08J 2333/08** (2013.01 - EP); **C08J 2333/10** (2013.01 - EP); **C08L 2312/00** (2013.01 - KR)

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3719059 A1 20201007**; **EP 3719059 A4 20210120**; **EP 3719059 B1 20230222**; CN 111670210 A 20200915; CN 111670210 B 20230328; JP 2021510396 A 20210422; JP 7118494 B2 20220816; KR 102556373 B1 20230717; KR 20200073358 A 20200624; US 11498050 B2 20221115; US 2020368722 A1 20201126; WO 2020122442 A1 20200618

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**EP 19895564 A 20191115**; CN 201980009343 A 20191115; JP 2020537520 A 20191115; KR 20180161293 A 20181213; KR 2019015681 W 20191115; US 201916966338 A 20191115